

### DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/08 has been entered. The restriction requirement filed on 10/12/06 remains in force.

Claims 1-5 and 8 have been cancelled. Claim 11 is withdrawn and claim 12 is new. Claims 6, 7, 9, 10 and 12 are under examination.

#### **Withdrawn rejections:**

Applicant's amendments and arguments filed 1/22/08 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below is herein withdrawn.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-10 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Somers et al. (US 5,428,001) in view of Rusch (WO 93/04585) and Mach et al. (WO/9418837) and Wichert et al. (WO 02/19823) and Roberts et al. (US 5,877,112).

Applicant claims an herbicidal composition for controlling weeds in maize comprising cyclohexanediones and organic phosphonate or phosphinate adjuvant at a concentration of less than 0.5% v/v.

#### **Determination of the scope and content of the prior art**

##### **(MPEP 2141.01)**

Somers et al. teach methods and compositions for combating weeds among maize plants by applying a cyclohexanedione herbicide (claims 1-15).

Wichert et al. teach mesotrione, a cyclohexanedione, formulations (Abstract and claims 1-8). Wichert et al. teach adjuvants including organic phosphates, organic phosphoric acids and phosphoric acid (Page 4, lines 9-16).

Rusch teaches herbicidal compositions which comprise a phosphonate or phosphinate of  $(RO)_xP=O(R')_y$  (where x and y are each 1 or 2 and R and R' may be the same or different and each represent straight or branch-chained alkyl of 1 to 12 carbon

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atoms) used with herbicides (Abstract; page 11 example 3 and claim 1, for example).

Rusch claim the ethylhexyl derivative (Claim 2).

Mach et al. teach synergistic activity of bis(2-ethylhexyl)-2-ethylhexyl phosphonate with the following variety of herbicides (claim 1):

(b) a herbicide selected from the group of  
thidiazimin (b<sub>1</sub>),  
2-[7-fluoro-3-oxo-4-(2-propynyl)-3,4-dihydro-2H-  
1,4-benzoxazin-6-yl]perhydroimidazo[1,5-a]pyridine-  
1,3-dione (b<sub>2</sub>),  
N-(4-chloro-2-ethyl-6-fluorobenzothiazol-7-yl)-  
1-cyclohexene-1,2-dicarboximide (b<sub>3</sub>),  
amidosulfuron (b<sub>4</sub>),  
mecoprop-P (b<sub>5</sub>),  
isoproturon (b<sub>6</sub>),  
chlorotoluron (b<sub>7</sub>),  
benazolin-ethyl (b<sub>8</sub>),  
glyphosate (b<sub>9</sub>),  
metsulfuron (b<sub>10</sub>),  
tribenuron (b<sub>11</sub>),  
thifensulfuron (b<sub>12</sub>), and  
bifenox (b<sub>13</sub>).

Mach et al. teach a weight ratio of the components between 20:1 to 1:20 (claim 2).

Roberts et al. is relied upon for teaching phosphate esters in herbicidal compositions (claims 1, 2 and 23 for example).

**Ascertainment of the difference between the prior art and the claims**

**(MPEP 2141.02)**

Somers et al. do not expressly disclose mesotrione or adding a phosphonate or phosphinate adjuvant to the composition. This deficiency in Somers et al. is cured by the teachings of Rusch and Mach et al. Rusch.

### **Finding of prima facie obviousness**

#### **Rational and Motivation (MPEP 2142-2143)**

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add mesotrione and phosphonate or phosphinate adjuvants to the composition of Somers, as suggested by Rusch and Mach et al. and Roberts et al, and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because: 1) Somers teach cyclohexanedione herbicides and Wichert teaches that mesotrione is in this chemical class; 2) Rusch and Mach teach the instantly claimed adjuvants for herbicidal formulations; and 3) Roberts et al. teach that the phosphate esters have been traditionally used as buffering agents and compatibility agents in the agricultural industry (column 1, lines 31-37). Mach especially teaches the instantly claimed phosphonate (instant claim 12) as having particular synergistic activity with various herbicides of differing chemical structure. It would be at least obvious to try other herbicides to see if the trend established by Mach continued with other herbicides. The amount of adjuvant to add is merely routine optimization of the amounts taught in the art.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**Response to arguments:**

Applicant asserts that one of ordinary skill in the art would not have had a reasonable expectation that the modification of Rush as suggested by the Examiner (i.e., replacement of the specific sugar beet herbicides of Rush with the mesotrione herbicide of Wichert) would result in a beneficial and synergistic herbicidal composition. The Examiner respectfully disagrees. The art teaches treatment of maize with cyclohexanediones as discussed above.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 6 and 7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12 and 13 of copending Application No. 11/000,700. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims a composition comprising mesotrione and a phosphate adjuvant. One of ordinary skill in the art would have recognized the obvious variation and overlap in subject matter with the instant application.

Claims 6, 7, 9 and 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/517,872. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims a composition comprising a metal chelate of mesotrione and a phosphate

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adjuvant (Claims 1 and 6). The types of phosphate, phosphonate or phosphinate adjuvants are described in copending claims 7-10. The Examiner notes the same structures for the phosphates in copending claim 7. One of ordinary skill in the art would have recognized the obvious variation and overlap in subject matter with the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Response to arguments:**

Applicant traversed the rejections but no arguments were provided. Applicant will consider filing a terminal disclaimer once allowable subject matter has been identified. Until that time, the rejections are maintained.

***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERNST V. ARNOLD whose telephone number is (571)272-8509. The examiner can normally be reached on M-F 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ernst V Arnold/  
Examiner, Art Unit 1616